



Ammonia Refrigeration Frequently Asked Questions

1. What are the requirements for ammonia refrigeration pressure relief replacement?

Answer: SPS 345.35 (3) states "reliefs shall be replaced in accordance with manufacturers' recommendations but not to exceed five years from the date of installation." See [SPS 345 PDF online](#).

Comm 45.35 (3) AMMONIA DISCHARGE. This is a department rule in addition to the requirements in IMC section 1105.8: Pressure relief valves for ammonia systems shall be replaced in accordance with manufacturer's recommendations but not to exceed five years from the date of installation. In lieu of the expiration date, a relief valve may be used for a total of five years if a record is maintained of when it was installed and it was not over two years old at the time of installation.

2. What is the requirement for use of a water diffusion tank? Release of the largest relief for one hour or One gallon of water / pound of ammonia?

Answer: ASHRAE 9.7.8.2 Ammonia Discharge. Ammonia from pressure-relief valves shall be discharged into one or more of the following:

- (a) The atmosphere, per 9.7.8;
- (b) A tank containing one gallon of water for each pound of ammonia that will be released in one hour from the largest relief device connected to the discharge pipe. The water shall be prevented from freezing. The discharge pipe from the pressure-relief device shall distribute ammonia in the bottom of the tank but no lower than 33 feet below the maximum liquid level. The tank shall contain the combined volume of ammonia and water without overflowing.
- (c) Other treatment systems that meet the requirements of the authority having jurisdiction.

Also review of the following code sections:

- SPS 345.35(3) Ammonia Discharge
- IMC 1105.8 which sends one to ASHRAE 15
- ASHRAE 15, 9.4, 9.5, 9.6 and 9.7 pressure relief section(s)
- IIAR 5.14